



ENVIRONMENTAL LABORATORY

1609 Western Avenue

9713517.1633

START

P.O. Box 12435

BOBMA9-ORK-003

0046230

(414) 498-2222

(800) 236-4067

FAX (414) 498-4067

Green Bay, WI 54307-2435

June 24, 1994

Westinghouse Hanford Co
Clay Smith
Richland Field Office
345 Hills Street
Richland, WA 99352

Dear Mr. Smith:

Subject: Samples received May 18, 1994
Batch No. 9405181 Sample Nos AA04453-AA04455; AA04098-AA04105



Enclosed you will find a report of analytical results for sample Nos. AA04453-AA04455; AA04098-AA04105. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties with the analysis. The QC is also enclosed in the data package.

Should you have any questions regarding this report, please feel free to call me at 1-800-236-4067. Please have both reference numbers listed above available when making inquiries regarding this report. Thank you.

Sincerely,

Mary Jo Doxtator-Nash
Mary Jo Doxtator-Nash
Federal Projects

Approval,

R. Everson
Rick Everson
Laboratory Manager



Enclosure

cc: File



Printed on Recycled Paper

9713512.1634
OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-94-0125

Record of Disposition No.

DATE: 5/20/94

LABORATORY: ORTEK

PROJECT TITLE/NO.: 100-FR-3/94-087

NCR NO.: 051974

SAMPLE IDENTIFICATION NUMBERS:

BOBMX8, BOBMX9

DESCRIPTION OF EVENT:

The Chain-of-Custody stated sample identification number as BOBMX8. The sample bottle was labeled BOBMX9. The Chain-of-Custody was broken.

DISPOSITION OF SAMPLES:

With concurrence from J.M. Ayres, cognizant engineer, cancel the analysis for BOBMX9.

APPROVAL SIGNATURES:

R. C. Smith/ *R. C. Smith*
OSM Project Coordinator (Print/Sign Name)

5/20/94
Date


J. M. Ayres/ *J. M. Ayres*
Technical Representative (Print/Sign Name)

5/25/94
Date

N/A
Quality Assurance (Print/Sign Name)

Date

0713517.1635

 Westinghouse Hanford Company		NONCONFORMANCE REPORT			1. Page <u>1</u> of <u>1</u>	2. Preprinted No. 051974 QA Log No. EQA-94-037
3. P. O., W. O., or Job Control No. <u>N/A</u>	4. System/End Use <u>RI/FS</u>	5. Item/Material <u>SAMPLES</u>	6. Dwg./Spec./Other No. <u>BOB MX8, BOB MX9</u>	7. Re <u>N/A</u>		
8. Program/Project/Other <u>100-FR-3 / 94-087</u>			9. Safety Class <u>N/A</u>	10. ASME Code Items <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If yes, notify authorized inspector)		
11. Supplier Name/Address <u>ENVIRONMENTAL FIELD SAMPLING SERVICES</u>				12. Notification of Potential Occurrence Requ: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
13. Code: Lot/Heat/Serial <u>N/A</u>	14. Lot Size <u>1</u>	15. Sample <u>1</u>	16. Qty. Acc. <u>Ø</u>	17. Inspection Criteria <input type="checkbox"/> Dwg. <input type="checkbox"/> Spec. <input type="checkbox"/> Insp. Plan <input checked="" type="checkbox"/> Other <u>WHC-CM-7-7 EII REV 4, SEC 6.2</u>		
18. Item	19. Description of Nonconformance (list serial no. where applicable)			22. Disposition, Justification, and Instructions		
	<u>AS STATED IN WHC-CM-7-7; EII 5.2, REV. 4; SEC. 6.2, THE CHAIN-OF-CUSTODY AND SAMPLE ANALYSIS REQUEST SHOULD BE COMPLETED CORRECTLY AND ACCOMPANY THE SAMPLES.</u> <u>CONTRARY TO THE ABOVE, THE SAMPLE NUMBER ON THE CHAIN-OF-CUSTODY (BOB MX8) DID NOT MATCH THE SAMPLE NUMBER ON THE BOTTLE (BOB MX9). THE CHAIN-OF-CUSTODY WAS BROKEN.</u>			<u>Reject: Reference ROD-94-0125, which states that the analysis was cancelled.</u>		

20. Originator's Signature <u>RC SMITH</u> <u>R. C. Smith</u>		Date <u>5/20/94</u>	23. Design Document Change Required? <input type="checkbox"/> Yes, Doc. No. <u> </u> <input checked="" type="checkbox"/> No	
21. Cognizant QA Manager's Signature <u>DD VOLKMAN</u>		Date <u>5/24/94</u>	24. Corrective Action Required? <input type="checkbox"/> Yes, No. <u> </u> <input checked="" type="checkbox"/> No	
Disp. App.	25. Cognizant Engineer <u>A.D. Krug</u> Date <u>5/24/94</u>	26. Technical Rep. <u>NA</u>	Date	Signature/Org. <u>NA</u> De
	QA Engineer <u>Sam Carigan</u> Date <u>6-8-94</u>	Signature/Org. <u>NA</u>	Date	Signature/Org. <u>NA</u> De
Close	27. Accept <u>0</u> Reject <u>1</u> Follow on NCR <u>NA</u> <u>Sam Carigan</u> 6-8-94 QA/C Personnel			

**ENVIRONMENTAL LABORATORY**

1609 Western Avenue

P.O. Box 12435

(414) 498-2222
(800) 236-4067
FAX (414) 498-4067
Green Bay, WI 54307-2435

** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 **

Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04453

Sample ID: BOBMQ9

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/06/94 - 10:45 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04454

Sample ID: BOBMY7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/06/94 - 10:45 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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9713517-1638

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04455

Sample ID: BOBMT7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/09/94 - 13:15 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04097

Sample ID: BOBMV5

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 11:06 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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9213517-1640

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Green Bay, WI 54307-2435

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04098

Sample ID: BOBMW7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/09/94 - 09:40 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

Date Received: 05/18/94

LIMS #: AA04099

Date Reported: 06/23/94

Sample ID: BOBMS5

Sample Matrix: GROUNDWATER

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 10:00 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

Date Received: 05/18/94

LIMS #: AA04100

Date Reported: 06/23/94

Sample ID: BOBMS9

Sample Matrix: GROUNDWATER

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 12:00 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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**** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 ******Sample Analysis Report**

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04101

Sample ID: BOBMR3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 13:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04102

Sample ID: BOBMR7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 11:50 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04103

Sample ID: BOBMS1

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 09:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	2.0	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388**Client Fax:****Attn:** P H BUTCHER**Batch #:** 9405181**LIMS #:** AA04104**Sample ID:** BOBMV1**Sample Matrix:** GROUNDWATER**Date Received:** 05/18/94**Date Reported:** 06/23/94**Project ID:** 100-FR-3Collection Information**Date-Time-By:** 05/12/94 - 11:30 -**Location:**

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	2.1	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Green Bay, WI 54307-2435

(414) 498-2222

(800) 236-4067

FAX (414) 498-4067

**** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 ******Sample Analysis Report**

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04105

Sample ID: BOBMT3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/24/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/12/94 - 09:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/23/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

Signed

Lab Director -Rick Everson

Date

6/24/94



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Coe # 40662 Date # 740518

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page 1 of 1																																							
Collector <i>K. D. Lee</i>		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal																																									
Project Designation 100-FR-3		Sampling Location <i>199-F5-6</i>				SAF No. 94-087																																													
Ice Chest No. <i>ASS 5/17/94</i>		Field Logbook No. <i>REL-1055</i>				Method of Shipment EMERY																																													
Shipped To ORTEK		Offsite Property No. <i>W44-0-0544-1</i>				Bill of Lading/Air Bill No. <i>ASS 5/17/94</i> <i>140213 7748</i>																																													
Possible Sample Hazards/Remarks		Preservative HCL pH<2																																																	
		Type of Container Gs																																																	
		No. of Container(s) 1																																																	
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE		Volume 40ml																																																	
<i>0.9°C rec'd at lab</i>		HYDRA-ZINE																																																	
SAMPLE ANALYSIS <i>AA04094</i> <i>AA04453</i>																																																			
Sample No.	Matrix*	Date Sampled	Time Sampled																																																
<i>BOB MQ9</i>	<i>W</i>	<i>05/06/94</i>	<i>1045</i>	<i>X</i>																																															
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*																																									
Relinquished By	Date/Time	Received By	Date/Time	<i>Ref 4V Date due 6/15/94</i> <i>Scan for radioactivity - OK</i>				<table border="0"><tr><td>S</td><td>=</td><td>Soil</td></tr><tr><td>SE</td><td>=</td><td>Sediment</td></tr><tr><td>SO</td><td>=</td><td>Solid</td></tr><tr><td>SL</td><td>=</td><td>Sludge</td></tr><tr><td>W</td><td>=</td><td>Water</td></tr><tr><td>O</td><td>=</td><td>Oil</td></tr><tr><td>A</td><td>=</td><td>Air</td></tr><tr><td>DS</td><td>=</td><td>Drum Solids</td></tr><tr><td>DL</td><td>=</td><td>Drum Liquids</td></tr><tr><td>T</td><td>=</td><td>Tissue</td></tr><tr><td>WI</td><td>=</td><td>Wipe</td></tr><tr><td>L</td><td>=</td><td>Liquid</td></tr><tr><td>V</td><td>=</td><td>Vegetation</td></tr><tr><td>X</td><td>=</td><td>Other</td></tr></table>		S	=	Soil	SE	=	Sediment	SO	=	Solid	SL	=	Sludge	W	=	Water	O	=	Oil	A	=	Air	DS	=	Drum Solids	DL	=	Drum Liquids	T	=	Tissue	WI	=	Wipe	L	=	Liquid	V	=	Vegetation	X	=	Other
S	=	Soil																																																	
SE	=	Sediment																																																	
SO	=	Solid																																																	
SL	=	Sludge																																																	
W	=	Water																																																	
O	=	Oil																																																	
A	=	Air																																																	
DS	=	Drum Solids																																																	
DL	=	Drum Liquids																																																	
T	=	Tissue																																																	
WI	=	Wipe																																																	
L	=	Liquid																																																	
V	=	Vegetation																																																	
X	=	Other																																																	
<i>Kathy Olan K.O.L.</i>	<i>5/6/94 1310</i>	<i>L. Sweeney</i>	<i>5/6/94 1310</i>																																																
Relinquished By	Date/Time	Received By	Date/Time																																																
<i>L. Sweeney</i>	<i>5/9/94 1145</i>	<i>A. Bond</i>	<i>5/9/94 1145</i>																																																
Relinquished By	Date/Time	Received By	Date/Time																																																
<i>A. Bond</i>	<i>5-10-94 1145</i>	<i>L. Sweeney</i>	<i>5/10/94 1145</i>																																																
Relinquished By	Date/Time	Received By	Date/Time																																																
<i>L. Sweeney</i>	<i>5/11/94</i>																																																		
LABORATORY SECTION	Received By <i>Glenn Portator</i>	Title <i>Sample Receiving</i>		Date/Time <i>5/18/94 1230</i>																																															
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time																																														

Case # 406662 Date 9/05/18

5/0

COG # 40662 Date# 940518

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST												Page 1 of 1	
Collector <i>K. Trapp</i>		Company Contact PH. BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal					
Project Designation 100-FR-3		Sampling Location <i>DOT</i>				SAF No. 94-087									
Ice Chest No. <i>ER-21</i>		Field Logbook No. <i>EEL-1054</i>				Method of Shipment EMERY									
Shipped To ORTEK		Offsite Property No. <i>W94-0-0594-1</i>				Bill of Lading/Air Bill No. <i>1402137748</i>									
Possible Sample Hazards/Remarks		Preservative	HCl pH<2												
		Type of Container	Gs												
		No. of Container(s)	1												
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE <i>0.9% acid at lab</i>		Volume	40ml												
		HYDRA-ZINE													
SAMPLE ANALYSIS <i>AA04455</i>															
Sample No.	Matrix*	Date Sampled	Time Sampled												
<i>BOBMT2</i>	<i>W</i>	<i>5/9/94</i>	<i>1315</i>	<i>X</i>											
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*			
Relinquished By <i>K. Trapp</i>		Date/Time <i>5/9/94</i>		Received By <i>Sweeney</i>		Date/Time <i>5/11/94 1430</i>		<i>Ref 4V Date due 6/15/94</i> <i>Scan for radio activity - OK</i>				<ul style="list-style-type: none">S = SoilSE = SedimentSO = SolidSL = SludgeW = WaterO = OilA = AirDS = Drum SolidsDL = Drum LiquidsT = TissueWI = WipeL = LiquidV = VegetationX = Other			
Relinquished By <i>Sweeney</i>		Date/Time <i>5/11/94</i>		Received By		Date/Time									
Relinquished By		Date/Time		Received By		Date/Time									
Relinquished By		Date/Time		Received By		Date/Time									
LABORATORY SECTION		Received By <i>Serna</i>		Title <i>Sample Receiving</i>		Date/Time <i>5/18/94 1230</i>									
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time									

Westinghouse Hanford
Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Date Turnaround

☐ Priority
☒ Normal

Collector B. T. WHITTEN

Company Contact
PH BUTCHER

Telephone No.
509-376-4388

Project Designation
100-FR-3

Sampling Location
199-F7-1

SAF No.
94-087

Ice Chest No. E2-21

Field Logbook No. EFL-1055

Method of Shipment
EMERY

Shipped To
ORTEK

Offsite Property No. W04-0-0594-1

Bill of Lading/Air Bill No. 1402137748

Possible Sample Hazards/Remarks

Preservative HCLpH<2

Type of
Container Gs

No. of
Container(s) 1

Special Handling and/or Storage
COOL TO 4 DEGREES CENTIGRADE 0.9°C held
at lab

Volume 40ml
HYDRA-
ZINE

SAMPLE ANALYSIS

AA04097

Sample No.	Matrix*	Date Sampled	Time Sampled																
BOB MV5	W	05/10/94	1106	X															

CHAIN OF POSSESSION

Sign/Print Names

Relinquished By K. D. Lee K.D. Lee 5/10/94 1324	Date/Time	Received By K. Trapp/K. Trapp 5/10/94 1327	Date/Time
Relinquished By K. Trapp/K. Trapp 5/10/94 1440	Date/Time	Received By L. Sweeney L. Sweeney 5/10/94 1440	Date/Time
Relinquished By L. Sweeney L. Sweeney 5/17/94 1000	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS

Ref 4V Date due 6/15/94
Scan for radio activity - OK

Matrix*

S = Soil
SE = Sediment
SO = Solid
SL = Sludge
W = Water
O = Oil
A = Air
DS = Drum Solids
DL = Drum Liquids
T = Tissue
WI = Wipe
L = Liquid
V = Vegetation
X = Other

LABORATORY
SECTION

Received By
Seria Dortator

Title
Sample Receiving

Date/Time
5/18/94 1230

FINAL SAMPLE
DISPOSITION

Disposal Method

Disposed By

Date/Time

☐ Priority
☒ Normal

BC-6000-828 (12/92)

[illegible]

Doc 406662 2004 9405181

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page 1 of 1	
Collector <i>K. Tripp</i>		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal			
Project Designation 100-FR-3		Sampling Location 100F				SAF No. 94-087							
Ice Chest No. <i>EL-21</i>		Field Logbook No. EEL-1054				Method of Shipment EMERY							
Shipped To ORTEK		Offsite Property No. <i>WPA-0-0594-1</i>				Bill of Lading/Air Bill No. <i>1402137748</i>							
Possible Sample Hazards/Remarks		Preservative	HC1pH<2										
		Type of Container	Gs										
		No. of Container(s)	1										
		Volume	40ml										
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE <i>0.9°C rec'd at lab</i>		HYDRA-ZINE											
SAMPLE ANALYSIS													
<i>AA04101</i>													
Sample No.	Matrix*	Date Sampled	Time Sampled										
<i>BOBMR3</i>	<i>W</i>	<i>5/11/94</i>	<i>1330</i>	<i>Y</i>									
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*			
Relinquished By	Date/Time	Received By	Date/Time	<i>Ref 4V Date due 6/15/94</i> <i>Scan for radio activity - OK</i>				<ul style="list-style-type: none">S = SoilSE = SedimentSO = SolidSL = SludgeW = WaterO = OilA = AirDS = Drum SolidsDL = Drum LiquidsT = TissueWI = WipeL = LiquidV = VegetationX = Other					
<i>K. Tripp</i>	<i>5/11/94 1435</i>	<i>John E. Sweeney</i>	<i>5-11-94 1435</i>										
Relinquished By	Date/Time	Received By	Date/Time										
<i>John E. Sweeney</i>	<i>5-11-94 1530</i>	<i>L. Sweeney</i>	<i>5-11-94 1530</i>										
Relinquished By	Date/Time	Received By	Date/Time										
<i>L. Sweeney</i>	<i>5/17/94 1500</i>												
Relinquished By	Date/Time	Received By	Date/Time										
LABORATORY SECTION	Received By	Title		Date/Time									
	<i>Gloria Bortat</i>	<i>Sample Receiving</i>		<i>5/18/94 1230</i>									
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time							

Coc#40002 9405181

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page 1 of 1					
Collector K. Trapp		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal							
Project Designation 100-FR-3		Sampling Location 170E				SAF No. 94-087											
Ice Chest No. ER-21		Field Logbook No. EFL-1054				Method of Shipment EMERY				AJS 5/11/94							
Shipped To ORTEK		Offsite Property No. W94-00594-1				Bill of Lading/Air Bill No. W 1402137748											
Possible Sample Hazards/Remarks		Preservative	HCL pH<2														
		Type of Container	Gs														
		No. of Container(s)	1														
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE 0.9°C rec'd at lab		Volume	40ml														
		HYDRA-ZINE															
SAMPLE ANALYSIS																	
AA04102																	
Sample No.	Matrix*	Date Sampled	Time Sampled														
BOB MR 7	W	5/11/94	1150	X													
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS						Matrix*					
Relinquished By K. Trapp / K. Trapp		Date/Time 5/11/94 1435		Received By Norm. [Signature]		Date/Time 5-11-94 1435		Ref 4V Date due 5/15/94 Scan for radioactivity - OK						S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other			
Relinquished By [Signature]		Date/Time 5-11-94 1535		Received By L. Sweeney		Date/Time 5-11-94 1535											
Relinquished By L. Sweeney		Date/Time 5/17/94 1000		Received By L. Sweeney		Date/Time 5-11-94											
Relinquished By		Date/Time		Received By		Date/Time											
LABORATORY SECTION		Received By Gloria Dattata				Title Sample Receiving				Date/Time 5/18/94 1230							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time							

COC #400007 9405181 ^{Date}

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page 1 of 1	
Collector <i>K. Trapp</i>		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Date Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal			
Project Designation 100-FR-3		Sampling Location <i>100E</i>				SAF No. 94-087							
Ice Chest No. <i>ER-21</i>		Field Logbook No. <i>EEI-1054</i>				Method of Shipment EMERY							
Shipped To ORTEK		Offsite Property No. <i>W94-0-0594-1</i>				Bill of Lading/Air Bill No. <i>1402137748</i>							
Possible Sample Hazards/Remarks		Preservative	HC1PH-2										
		Type of Container	Gs										
		No. of Container(s)	1										
		Volume	40ml										
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE <i>0.9 rec'd at Lab</i>		HYDRA-ZINE											
SAMPLE ANALYSIS													
<i>AA04103</i>													
Sample No.	Matrix*	Date Sampled	Time Sampled										
<i>BORMS1</i>	<i>W</i>	<i>5/11/94</i>	<i>0930</i>	<i>X</i>									
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*	
Relinquished By		Date/Time		Received By		Date/Time		<i>Ref 4U Date due 6/15/94</i> <i>Scan for radio activity - OK</i>				<ul style="list-style-type: none">S = SoilSE = SedimentSO = SolidSL = SludgeW = WaterO = OilA = AirDS = Drum SolidsDL = Drum LiquidsT = TissueWI = WipeL = LiquidV = VegetationX = Other	
<i>K. Trapp/K. Trapp</i>		<i>5/11/94 1435</i>		<i>Don E. Rogers</i>		<i>5-11-94 1435</i>							
<i>Don E. Rogers</i>		<i>5-11-94 1520</i>		<i>L. Sweeney</i>		<i>5-11-94 1520</i>							
<i>L. Sweeney</i>		<i>5/11/94 1520</i>											
Relinquished By		Date/Time		Received By		Date/Time							
<i>Don E. Rogers</i>		<i>5/11/94 1520</i>		<i>L. Sweeney</i>		<i>5/11/94 1520</i>							
Relinquished By		Date/Time		Received By		Date/Time							
<i>L. Sweeney</i>		<i>5/11/94 1520</i>											
LABORATORY SECTION		Received By <i>Glenn D. Taylor</i>		Title <i>Sample Receiving</i>		Date/Time <i>5/18/94 1230</i>							
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time							

Scan for radio activity OK

S	=	Soil
SE	=	Sediment
SO	=	Solid
SL	=	Sludge
W	=	Water
O	=	Oil
A	=	Air
DS	=	Drum Solids
DL	=	Drum Liquids
T	=	Tissue
WI	=	Wipe
L	=	Liquid
V	=	Vegetation
X	=	Other

Co# 404662 Batch# 9405781

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST								Page 1 of 1		
Collector K. Trapp		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal		
Project Designation 100-FR-3		Sampling Location 100 E				SAF No. 94-087						
Ice Chest No. ER-21		Field Logbook No. EEL-1054				Method of Shipment EMERY						
Shipped To ORTEK		Offsite Property No. W94-O-0594-1				Bill of Lading/Air Bill No. 1402132748						
Possible Sample Hazards/Remarks		Preservative HCL pH<2										
		Type of Container Gs										
		No. of Container(s) 1										
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE 0.9°C rec'd at lab		Volume 40ml										
SAMPLE ANALYSIS AAQ4105		HYDRA-ZINE										
Sample No.	Matrix*	Date Sampled	Time Sampled									
BOBMT3	W	5/12/94	0930	X								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*		
Relinquished By G.G. HANFORD CO.	Date/Time 5/12/94 1400	Received By M. E. ROBERTS	Date/Time 5-12-94 1400	Ref 4V Date due 6/15/94				S = Soil				
Relinquished By M. E. ROBERTS	Date/Time 5-12-94 1425	Received By A. J. SIMPSON	Date/Time 5/12/94/1425	Scan for radio activity - OK				SE = Sediment				
Relinquished By A. J. SIMPSON	Date/Time 5/17/94 1045	Received By	Date/Time					SO = Solid				
Relinquished By	Date/Time	Received By	Date/Time					SL = Sludge				
								W = Water				
								O = Oil				
								A = Air				
								DS = Drum Solids				
								DL = Drum Liquids				
								T = Tissue				
								WI = Wipe				
								L = Liquid				
								V = Vegetation				
								X = Other				
LABORATORY SECTION	Received By Stuvia Dostin	Title Sample Receiving	Date/Time 5/18/94 1230									
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time									

9213512-1660

ORTEK

TELEPHONE CONVERSATION RECORD

WHO:
YOUR NAME: F. Webster DATE: 5/19/95 TIME: 3:00pm

CALLED ☐ RECEIVED CALL ☒ RETURNED CALL ☐

CLIENT NAME: Clay Smith COMPANY: WHC

PHONE N^o: (509) 372-2537 FAX N^o: (509) 372-2106

WHAT:
PROJECT: _____ BATCH N^o: _____

ANALYSES: Hydrazine Samples

SUMMARY OF CONVERSATION: _____

Cancel the analysis on
Sample ID #BAX9

Also, from now on contact Clay Smith
directly, rather than samples.

WHEN:
ACTION REQUIRED: _____

ACTION BY: _____ DATE: ____/____/____

COMMENTS: _____

CC: Working file
QC Department
Extractions

Sample Receiving
Metals/Wet Chem
Organics

Lab Director
Project Manager

Client Services
Administration

May 20 7/22/96 MS

ORTEK SAMPLE RECEIVING OUT OF CONTROL FORM

COMPANY NAME: WESTINGHOUSE HANFORD CO	CONTACT PERSON: PH BUTCHER
PROJECT NAME: 100E / EFL-1054	REPORTED BY: H R
BATCH NUMBER:	SAMPLE NUMBERS:
DATE: TIME: 5/18/94 1249	PHONE NUMBER: 509-376-4388
<input type="checkbox"/> HOLD TIME <input type="checkbox"/> IMPROPER PRESERVATIVE <input type="checkbox"/> PAPERWORK DISCREPANCY <input type="checkbox"/> IMPROPER CONTAINER	<input type="checkbox"/> SAMPLE TEMPERATURE ____°F <input type="checkbox"/> METHODOLOGY <input type="checkbox"/> INSUFFICIENT VOLUME <input type="checkbox"/> OTHER
DESCRIPTION: COC describes SAMPLE # AS BOB MX8 —	
SAMPLE ID = BMX9	
PERSON RESPONSIBLE FOR RESOLUTION: J Webster, called PH Butcher	
CLIENT RESPONSE: Called answering machine to call me back. 1:15 PM 2:15 4:30	
5/19/95 - 8:30 AM Butcher called back.	
BOBMX8 - not hydrazine.	
Sample ID is correct. Changed the COC to BMX9.	
5/19/95 - 10:10 AM Clay Smith called - The COC was broken so he will check with customer to see if we can go ahead w/samp	
SIGNATURE: Jocella Webster	TIME: 1:15 PM
DATE: 5/8/95	

cc: Working File
 Mary Jo Nash
 Tori Cook
 Phil Scott
 Barb Rutten
 John Rather
 Chris Groh
 Bill Jackson
 Jennifer Fazio

97-3517-1662

ORTEK SAMPLE RECEIVING OUT OF CONTROL FORM		
COMPANY NAME: DOE/Westinghouse		CONTACT PERSON: PA Butcher
PROJECT NAME:		REPORTED BY: Mary Ken
BATCH NUMBER: 9405181	SAMPLE NUMBERS: AA04798	
DATE: TIME: 5/23/94 11:20	PHONE NUMBER: 509-376-4888	
<input type="checkbox"/> HOLD TIME <input type="checkbox"/> IMPROPER PRESERVATIVE <input checked="" type="checkbox"/> PAPERWORK DISCREPANCY <input type="checkbox"/> IMPROPER CONTAINER		<input type="checkbox"/> SAMPLE TEMPERATURE ____°F <input type="checkbox"/> METHODOLOGY <input type="checkbox"/> INSUFFICIENT VOLUME <input type="checkbox"/> OTHER
DESCRIPTION: no date/time of collection listed on CAC Date/time 5/9/94 0940 listed on bottle label		
PERSON RESPONSIBLE FOR RESOLUTION:		
CLIENT RESPONSE:		
SIGNATURE:	TIME:	DATE:

cc: Working File
Mary Jo Nash
Tori Cook
Phil Scott
Barb Rutten
John Rather
Chris Groh
Bill Jackson
Jennifer Fazio

9713517.1663

SAMPLE NONCOMPLIANCE REPORT

Client: DOE/Westinghouse Attention: PH ButcherProject Name/No: _____ Received Date: 5/18/94Batch No: 9405181 Sample No: AA04098Client Phone: 509-376-4388 Sample Receiving Initials: AKB

Sample collection, preservation and handling procedures required by state and federal regulations shall be followed. Sample(s) received in the laboratory not meeting these regulations will be reported as a Noncompliance and indicated with a check (✓) below.

☐ Sample(s) were received at _____ °C, which is above the EPA requirements of 4°C.

☐ Sample(s) not properly preserved per EPA requirements for the following parameters: _____

☐ Sample(s) received in improper bottles for the following parameters: _____

☐ Sample(s) received beyond the EPA maximum holding time for the following parameters: _____

Parameter	Max. Holding Time	Past-Time

☒ Sampling date/time not supplied by the client. Holding time not known.

☐ Samples received without Chain Of Custody or proper paperwork.

Comments: _____

☐ Sample(s) not field filtered as required for dissolved parameters. Samples were lab filtered upon receipt as requested, then preserved.

☐ VOC vial(s) received with headspace does not meet proper sample handling.

Comment: _____

☐ Insufficient sample size received to complete analysis.

Comment: _____

cc: Working file, Dept, Supervisors, Project Manager.

Contractor WMC	OFF-SITE PROPERTY CONTROL	CONTROL NUMBER (To be obtained from PROPERTY MANAGEMENT) W94-0-0594-1
--------------------------	--------------------------------------	--

PART I - TO BE COMPLETED BY ORIGINATOR

Department ER Eng Support	Section Field & Analytical Supp	Unit ER Field Sampling
The following items are to be shipped from <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Routing <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Vendor		
Shipped to ORTEK ENV LAB 1609 Western Ave P.O. Box 12345 Green Bay, WI 54307-2435		Off-site Custodian Ms Mary Jo Doxtator-Nash
		Full Title

Quantity	Description (Include Serial and any Government Tag Numbers)	Original Cost
1 lbs.	Sample #: 200-BB-5 Cooler ID: 200-BB-5 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A
1 lbs.	Sample #: 200-BB-5 Cooler ID: 200-BB-5 Polycooler with groundwater samples packed in wet ice and vermiculite	N/A

☐ Classified ☒ Unclassified ☐ Shipped Under DOE Contract ☐ Shipped Under Contractor's Use Permit Contract

Necessity for the Off-Site Use of this Property

Sampling supports RI/FS work in the

200-BB-5 area

Bill of lading # 140213 7748

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO SHIPPING.

RM Clearance for Public Release 200-BB-5	RM Survey No. 7748516	Date 5/17/91
Location of Property (Area & Bldg.) 200-BB-5	Contact P. H. Butcher	Phone (509) 376-4388
Date Ready for Shipment 5/17/91	Cost Code to be Charged 88410	Approximate Date This Property will be Returned NA
Originated By P.H. Butcher	Date	Authorized By [Signature]
Signature and Name of Property Control	Custodian Date	Property Management Approval [Signature]

PART II - TO BE COMPLETED BY SHIPPING

Signature of Recipient [Signature]	Return Order No.	Date Issued	Purchase Order No.	Date Issued
Date 5-17-91				

DISTRIBUTION

By Originator White, Green, Yellow, Pink - Property Management Goldenrod - Retain	Shipping Operation - Sign all Copies and Forward to: White - Property Management Green - Property Control Custodian (Issuing Office) Yellow - Retain Pink - Originator
---	--

VALIDATION SUMMARY



9713517.1666

Los Alamos Technical Associates, Inc.

8633 Gage Blvd. / Kennewick, WA 99336 / Telephone (509) 783-4369 / FAX (509) 783-9661

August 23, 1994

Karl Pool
Westinghouse Hanford Company
P.O. Box 1970
Richland, WA 99352



Dear Karl,

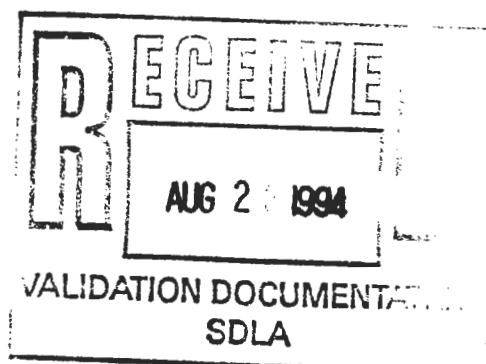
Attached is the data validation report for analytical results for 100-FR-3 Groundwater Operable Unit (SDG B0BMQ9-ORK-003). The package was received by Los Alamos Technical Associates on August 3, 1994. Validation of this package began on August 18, and was completed on August 23, 1994.

If you have any questions, please let me know.

Sincerely,

Janet Jones
Senior Environmental Engineer

cc: Chris Haecker, LATA
VW402.61 file

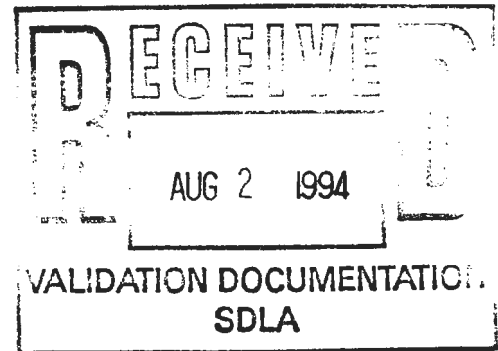


ms
7/22/96

9713517.1667



DATA VALIDATION REPORT
for
100-FR-3 Groundwater Operable Unit
SDG BOBMQ9-ORK-003
LATA VW402.61



Westinghouse Hanford Company
P.O. Box 1970
Richland, Washington 99352

August 23, 1994

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**100-FR-3 Groundwater Operable Unit
Data Validation Narrative**

INTRODUCTION

All samples in Sample Delivery Group (SDG) BOBMQ9-ORK-003 were validated at level "D" as defined in the Data Validation Procedures for Chemical Analysis (WHC-SD-EN-SPP-002).

The data package was received by Los Alamos Technical Associates (LATA) on August 3, 1994. Validation began on August 18, 1994 and was completed on August 23, 1994.

The chemical analyses were performed by Ortek.

ANALYSES REQUESTED

Twelve (12) water samples numbered BOBMQ9, BOBMY7, BOBMT7, BOBMV5, BOBMW7, BOBMS5, BOBMS9, BOBMR3, BOBMR7, BOBMS1, BOBMV1, and BOBMT3 were collected on May 6, 9, 10, 11, 12, 1994 by WHC and transferred to Ortek for analysis. The following determinations were conducted on all of the samples in this SDG:

Hydrazine

Method ASTM D1385

DATA QUALITY OBJECTIVES

The data quality objectives for 100-FR-3 Groundwater Operable Unit are specified in the *Remedial Investigation/Feasibility Study Work Plan for the 100-FR-3 Operable Unit* (DOE/RL-91-53, Rev. 0). Precision, accuracy, and detection limit requirements for the project have been derived from [the Third Edition of SW-846 (EPA, 1992)]. Maximum holding times are listed in the 3rd Edition, Final Update I of SW-846 (EPA, July 1992).

The primary objective of the data validation effort was to ensure these data quality objectives were met, and that the data are usable and defensible. This was accomplished through a detailed examination of the data package to recreate the analytical process and verify that proper and acceptable analytical techniques had been applied. The data package was checked for correct submission of required deliverables, correct transcription of raw data to the summary forms, and for proper calculation of a number of parameters.

Precision. Goals for precision were met for all sample results.

Accuracy: Goals for accuracy were met for all sample results.

Sample Result Verification: All sample results were supported in the raw.

Detection Limits: Detection limits goals were met for all sample results.

000002

DATA QUALITY OBJECTIVES (Cont.)

Completeness: The data package was 100% complete for the requested analyses.

Data qualifiers are assigned to any results that have been determined to be deficient. These are discussed below.

MAJOR DEFICIENCIES (REJECTED DATA)

The following major deficiencies resulted in the qualification of the results as unusable.

- No major deficiencies were observed.

MINOR DEFICIENCIES

The following minor deficiencies were discovered. These minor shortcomings are not expected to significantly affect the overall quality of the data.

HYDRAZINE

- No deficiencies were observed.

COMMENTS

- There is no VEDD (Validation Electronic Data Deliverable) or Data Qualification Summary included with this report due to the fact that no qualifications were made or changed by the validator.

REFERENCES

EPA July 1992, *Test Methods for Evaluating Solid Waste (SW-846)*, Third Edition; U.S. Environmental Protection Agency, Washington, D.C.

WHC 1993, *Data Validation Procedures for Chemical Analyses*, WHC-SD-EN-SPP-002, Rev. 2, Westinghouse Hanford Company, Richland, Washington.

DOE 1992, *Remedial Investigation/Feasibility Study Work Plan for the 100-FR-3 Operable Unit*, DOE/RL-91-53, Rev. 0, Department of Energy, Hanford Site, Richland, Washington.

DATA VALIDATION APPLIED QUALIFIERS

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows.

- U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- UJ- Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a QC deficiency identified during data validation, the associated quantitation limit is an estimate.
- J- Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate, but the data are usable for decision making purposes.
- BJ- Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.
- R- Indicates the compound or analyte was analyzed for, detected, and due to an identified QC deficiency the data are unusable.
- UR- Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data are unusable due to an identified QC deficiency.
- JN- Indicates a tentatively identified compound (TIC) that has been determined to be valid in terms of identification and quantitation.
- UJN- Indicates a tentatively identified compound (TIC) that has been determined to be presumptive and valid (JN) in terms of identification and quantitation and has been qualified as undetected (U) due to associated blank contamination.
- NJ- Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific application (i.e., usable for decision making purposes).
- N- Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision making purposes).

LABORATORY APPLIED QUALIFIERS

Qualifiers which may be applied by the laboratory in compliance with applicable requirements are as follows.

Organic Data Qualifiers

- U- Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.
- J- Indicates an estimated value. This flag is used when estimating concentrations of tentatively identified compounds (TICs) or when the presence of a TCL compound is confirmed at a concentration of less than the CRQL but greater than the IDL.
- N- Indicates presumptive evidence of a compound. This flag is used only by the laboratory for TIC results when the identification is based on a mass spectral library search.
- P- This flag is used for pesticide/Aroclor target analytes when there is greater than 25% difference for detected values between the quantitation and confirmation GC columns. The lower of the two concentrations is reported on the report form and the result is flagged with a "P".
- C- This flag applies to pesticide results where the identification has been confirmed by GC/MS. This flag should not be used by the laboratory if GC/MS confirmation was attempted but unsuccessful, in which case, the laboratory should use an "X" flag as defined below. The "X" flag is then defined in the SDG narrative.
- B- This flag applies to results in which the analyte was detected in both the sample and the associated blank. The combination of the "B" flag with the "U" flag ("BU" or "UB") is expressly prohibited in the analytical SOW.
- E- This flag identifies compounds whose concentrations exceed the calibrated range of the GC/MS instrument.
- D- This flag identifies compounds identified in an analysis at a secondary dilution factor.
- A- Indicates a TIC which is a suspected aldol-condensate product.
- X- This is a non-specific flag used to properly define the results. If used, this flag must be properly defined within the body of the SDG.

LABORATORY APPLIED QUALIFIERS**Inorganic Qualifiers**

- U- Indicates the analyte was analyzed for but not detected in the sample.
- B- Indicates the analyte concentration is less than the CRDL but greater than the IDL.
- E- Indicates the value reported is estimated due to the presence of interference.
- M- Indicates duplicate injection precision criteria were not met during graphite furnace (GFAA) analysis.
- N- Indicates spiked sample recovery was not within the control limits.
- S- Indicates the reported value was determined by the Method of Standard Additions (MSA).
- W- Indicates post-digestion spike for GFAA analysis is outside control limits and the sample absorbance is less than 50% of the spike absorbance.
- *- Indicates duplicate analysis was not within control limits.
- + - Indicates the correlation coefficient (r) for the MSA was less than 0.995.

9713517.1675

Data Summary Tables

000008

GENERAL CHEMISTRY DATA SUMMARY TABLE

FILE #: VW 402.61		HEIS #:	BOBMQ9	BOBMY7	BOBMT7	B0BMV5	B0BMW7	B0BMS5
		Date:	5/18/94	5/18/94	5/18/94	10-May-94	10-May-94	10-May-94
		Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	1.00		1.60		1.00	

FILE #: VW 402.61		HEIS #:	B0BMS9	B0BMR3	B0BMR7	B0BMS1	B0BMV1	B0BMT3
		Date:	10-May-94	11-May-94	11-May-94	11-May-94	12-May-94	12-May-94
		Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
Constituent	CAS #	Units	Results	Q	Results	Q	Results	Q
Hydrazine	302-01-2	ug/L	3.20		1.00		2.00	

000000

entered by: C.S.
date: 8/18/94

shaded areas indicate changes by the validator
ORK003

checked by: WJC
date: 8-18-94

9713517.1677

Sample Results (Form I's)

000010



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** Certified for Environmental Analytical Services by Wisconsin DNR Laboratory Certification No. 405099530 **

Sample Analysis Report

To: US DEPARTMENT OF ENERGY

Client Phone: 509-376-4388

C/O WESTINGHOUSE HANFORD

Client Fax:

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04453

Sample ID: BOBMQ9

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/06/94 - 10:45 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-13-94 WOC

Signed

R. J. Everson

Lab Director -Rick Everson

Date

6/24/94

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY

Client Phone: 509-376-4388

C/O WESTINGHOUSE HANFORD

Client Fax:

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04454

Sample ID: BOBMY7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/06/94 - 10:45 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

8-13-94 (CWC)

Signed

R. Everson

Lab Director -Rick Everson

Date

6/24/94

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C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04455

Sample ID: BOBMT7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/09/94 - 13:15 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-23-94 (WJE)

Signed

Lab Director -Rick Everson

Date

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Client Phone: 509-376-4388

C/O WESTINGHOUSE HANFORD

Client Fax:

COMPANY

2355 STEVENS DR

RICHLAND WA 99352

Attn: P H BUTCHER

Batch #: 9405181

Date Received: 05/18/94

LIMS #: AA04097

Date Reported: 06/23/94

Sample ID: BOBMV5

Sample Matrix: GROUNDWATER

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 11:06 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-23-94 *(signature)*

Signed

R. Everson

Lab Director -Rick Everson

Date

6/24/94

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C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04098

Sample ID: BOBMW7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/09/94 - 09:40 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-24-94 (RT)

Signed

Lab Director -Rick Everson

Date

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COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04099

Sample ID: BOBMS5

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 10:00 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

B-24-94 (OT)

Signed

R. Everson

Lab Director -Rick Everson

Date

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COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04100

Sample ID: BOBMS9

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/10/94 - 12:00 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

8-24-94 @R

Signed

R. Everson

Lab Director -Rick Everson

Date

6/24/94

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Sample Analysis Report

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C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04101

Sample ID: BOBMR3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 13:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.0	1.0	UG/L	06/03/94	SAD

8-24-94
(WTR)

Signed

Lab Director -Rick Everson

Date

6/24/94

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COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04102

Sample ID: BOBMR7

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 11:50 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	1.6	1.0	UG/L	06/03/94	SAD

Signed

R. Everson

Lab Director -Rick Everson

Date

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Sample Analysis Report

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C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04103

Sample ID: BOBMS1

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/11/94 - 09:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	2.0	1.0	UG/L	06/03/94	SAD

8-24-94
CUTC

Signed

Lab Director -Rick Everson

Date

6/24/94

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Sample Analysis Report

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C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04104

Sample ID: BOBMV1

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/23/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/12/94 - 11:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/22/94	RTE
HYDRAZINE	ASTM D1385	2.1	1.0	UG/L	06/03/94	SAD

8-24-94
(WJC)

Signed

Lab Director -Rick Everson

Date

6/24/94

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Sample Analysis Report

To: US DEPARTMENT OF ENERGY
C/O WESTINGHOUSE HANFORD
COMPANY
2355 STEVENS DR
RICHLAND WA 99352

Client Phone: 509-376-4388

Client Fax:

Attn: P H BUTCHER

Batch #: 9405181

LIMS #: AA04105

Sample ID: BOBMT3

Sample Matrix: GROUNDWATER

Date Received: 05/18/94

Date Reported: 06/24/94

Project ID: 100-FR-3

Collection Information

Date-Time-By: 05/12/94 - 09:30 -

Location:

Test/Parameter	Method	Result	MDL/ PQL	Units	Analysis/ Extraction	Analyst/ Supervisor
					Date	Approval
ORGANICS SUPERVISOR APPROVAL		COMPLETE			06/23/94	RTE
HYDRAZINE	ASTM D1385	3.2	1.0	UG/L	06/03/94	SAD

8-24-94
(woc)

Signed

Lab Director -Rick Everson

Date 6/24/94

000022



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Checklists

9713517.1691

LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	<u>D</u>	E
PROJECT: 100 - FR - 3			SDG: BOBMQ9-Ork-003		
VALIDATOR: COWAN		LATA NO: VW407.61		DATE: 8-18-94	
SAF NO.:		LAB: Ortek		CASE:	
QAPP REFERENCE:			SAP REFERENCE:		
If there is no QAPP or SAP reference, contact the WHC Technical Representative. If the document(s) are not provided, default to the Method acceptance criteria.					
ANALYSES PERFORMED					
<input type="checkbox"/> Alkalinity 310.1	<input type="checkbox"/> Chloride 325.3	<input type="checkbox"/> pH 9040/150.1	<input type="checkbox"/> TOC 9060/415.1	<input type="checkbox"/> TDS 160.1 <input type="checkbox"/> TSS 160.2	<input type="checkbox"/>
<input type="checkbox"/> Anions 300.0	<input type="checkbox"/> Chromium+6 7196	<input type="checkbox"/> Phenols 9065/420.1	<input type="checkbox"/> TOX 9020/9022	<input type="checkbox"/> Sulfate 375.4	<input type="checkbox"/>
<input type="checkbox"/> Ammonia 350.3	<input type="checkbox"/> COD 410.1	<input type="checkbox"/> Phosphorus 365.2	<input type="checkbox"/> TKN 351.3	<input type="checkbox"/> Sulfide 9030/376.1	<input type="checkbox"/>
<input type="checkbox"/> BOD 405.1	<input type="checkbox"/> Nitrate+Nitrite 353.2	<input type="checkbox"/> Oil & Grease 413.1	<input type="checkbox"/> TPH 9070/418.1	<input checked="" type="checkbox"/> Hydrazine ASTM D3385	<input type="checkbox"/>
SAMPLES/MATRIX There are twelve ground water samples: BOBMV5, BOBMW7, BOBMS5, BOBM59, BOBMR3, BOBMR7, BOBMS1, BOBMV1, BOBMT3, BOBMQ9, BOBMY7, BOBMT7					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Is technical verification documentation present? Yes No N/AIs a case narrative present? Yes No N/A

Comments: _____

2. HOLDING TIMES (see HOLDING TIME SUMMARY form)

Are sample holding times acceptable? Yes No N/A

Comments: Hydrazine does not have a regulatory hold time.

★ For methods requiring a calibration curve (three standards and a blank) use the following equation for correlation coefficient (r).

$$r = \frac{\frac{\text{Correlation Coefficient (r)}}{N \sum x_i y_i - \sum x_i \sum y_i}}{\left[\frac{N \sum x_i^2 - (\sum x_i)^2}{N} \right]^{1/2} \left[\frac{N \sum y_i^2 - (\sum y_i)^2}{N} \right]^{1/2}}$$

★ For methods requiring ICV/CCV or a calibration check standard, calculate recovery as follows:

$$\%R = \frac{\text{Recovery observed value}}{\text{true value}} \times 100$$

Comments:

9713517.1693
LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

4. BLANKS (see BLANK AND SAMPLE DATA SUMMARY form)

Were laboratory blanks analyzed? Yes No N/A

Are laboratory blank results acceptable? Yes No N/A

Comments: _____

5. ACCURACY (see ACCURACY DATA SUMMARY form)

Were spike samples analyzed at the required frequency? Yes No N/A

Are all spike recoveries acceptable? Yes No N/A

★

Spike Recovery

$$\%R = \frac{SSR - SR}{SA} \times 100$$

where:

SSR = spiked sample result

SR = sample result

SA = spike added

Were LCS analyses performed at the required frequency? Yes No N/A

Are all LCS recoveries acceptable? Yes No N/A

★

Recovery

$$\%R = \frac{\text{observed value}}{\text{true value}} \times 100$$

Comments: According to -002 protocol an LCS is optional

9713517-1694
LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

6. PRECISION (see *PRECISION DATA SUMMARY* form)

Were laboratory duplicate samples analyzed
 at the required frequency?

Yes No N/A

Are all duplicate RPD values acceptable?

Yes No N/A

★

Relative Percent Difference

$$RPD = \frac{|OS - D|}{\left(\frac{OS + D}{2}\right)} \times 100$$

where:

OS = sample concentration (original sample/MS)

D = duplicate concentration (duplicate sample/MSD)

Comments: _____

7. FIELD QC SAMPLES

Were field QC samples (field/trip blanks, duplicates, splits, performance audit) identified? Yes No N/A

Are field/trip blank results acceptable? Yes No N/A

Are field duplicate RPD values acceptable? Yes No N/A

Are field split RPD values acceptable? Yes No N/A

Are performance audit sample results acceptable? Yes No N/A

Comments: _____

LATA GENERAL CHEMISTRY DATA VALIDATION CHECKLIST

8. ANALYTE QUANTITATION

Was analyte quantitation performed properly? Yes No N/AAre results calculated properly? Yes No N/A

★ For methods with calibration curves:

General Chemistry Results Calculation, water sample

$$\text{Concentration } (\mu\text{g/L}) = \text{CONCW} \times \text{DfW}$$

where:

CONCW = concentration off calibration curve ($\mu\text{g/L}$)

DfW = dilution factor (if any)

or

General Chemistry Results Calculation, soil sample

$$\text{Concentration (mg/Kg)} = \frac{(\text{CONCS} \times \text{DfS} \times \text{VOL})}{(\text{WS} \times \text{SS})}$$

where:

CONCS = concentration off calibration curve (mg/L)

VOL = volume of final extract (ml)

WS = weight of sample (g)

DfS = dilution factor (if any)

SS = dry weight conversion $[(100 - \% \text{moisture}) \times 100]$

★ For all other results calculations, see the analytical method.

Comments: _____

9. REPORTED RESULTS AND DETECTION LIMITS

Are results reported for all requested analyses? Yes No N/AAre results supported in the raw data? Yes No N/ADo results meet the CRDLs? Yes No N/A

Comments: _____

VALIDATION SUMMARY

MAJOR DEFICIENCIES:

There Are no major deficiencies.

MINOR DEFICIENCIES:

There are no minor deficiencies

COMMENTS:

There is no regulatory defined holding time for hydrazine. All samples were run within 26 days or less.

LINEAR REGRESSION ANALYSIS

Analysis: General Chemistry
 Constituent: Hydrazine
 SDG: BOBMQ9-ORK-003

Calibration Date: 2-Jun-94

Date: 18-Aug-94
 Validator: Cowan

Concentration	Absorbance
4.74	0.034
9.75	0.072
24.92	0.187
49.46	0.373
101.43	0.767
199.43	1.510

r
1.0000

r²
1.0000

slope
131.9051

x intercept
0.2556

1/slope
0.0076

y intercept
-0.0019

LINEAR REGRESSION ANALYSIS

Analysis: General Chemistry
 Constituent: _____
 SDG: BOBMQ9-ORK-003

Calibration Date: _____

Date: 18-Aug-94
 Validator: Cowan

Concentration	Absorbance
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

r
#DIV/0!

r²
#DIV/0!

slope
#DIV/0!

x intercept
#DIV/0!

1/slope
#DIV/0!

y intercept
#DIV/0!

Validator: Cowan

[illegible]

000032

Date: 18-Aug-94
Validator: Cowan

[illegible]

Date: 18-Aug-94
Validator: Cowan

[illegible]

Analysis: General Chemistry
SDG: BOBMQ9-ORK-003
Sample ID: BOBMS9

[illegible]

Laboratory Case Narratives



ENVIRONMENTAL LABORATORY

1609 Western Avenue

P.O. Box 12435

Green Bay, WI 54307-2435

(414) 498-2222

(800) 236-4067

FAX (414) 498-4067

June 24, 1994

Westinghouse Hanford Co.
Clay Smith
Richland Field Office
345 Hills Street
Richland, WA 99352

Dear Mr. Smith:

Subject: Samples received May 18, 1994
Batch No. 9405181 Sample Nos AA04453-AA04455; AA04098-AA04105

Enclosed you will find a report of analytical results for sample Nos. AA04453-AA04455; AA04098-AA04105. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties with the analysis. The QC is also enclosed in the data package.

Should you have any questions regarding this report, please feel free to call me at 1-800-236-4067. Please have both reference numbers listed above available when making inquiries regarding this report. Thank you.

Sincerely,

Mary Jo Doxtator-Nash
Mary Jo Doxtator-Nash
Federal Projects

Approval

R. Everson
Rick Everson
Laboratory Manager



Enclosure

cc: File

000036



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Chain-of-Custody Information

000037

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

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Data Turnaround	
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99	99
100	100

☐ Priority
☒ Normal

00038

Collector <i>K.O Lee</i>	Company Contact PH BUTCHER	Telephone No. 509-376-4388	<input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal													
Project Designation 100-FR-3	Sampling Location <i>100-FR-3 (194-F5-6)</i>	SAF No. 94-087														
Ice Chest No. <i>ATSS 1744 FR 9 FR-21</i>	Field Logbook No. <i>FFL-1055</i>	Method of Shipment EMERY														
Shipped To ORTEK	Offsite Property No. <i>WPA-C-059A-1 1434-C 0518-300</i>	Bill of Lading/Air Bill No. <i>ATSS 1744 FR 9 1402137748</i>														
Possible Sample Hazards/Remarks	Preservative HCl pH<2															
	Type of Container Gs															
	No. of Container(s) 1															
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE	Volume 40ml															
<i>0.9°C</i> <i>Rec'd at Lab</i>	HYDRA-ZINE															
SAMPLE ANALYSIS																

[illegible]

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS	Matrix *
Relinquished By	Date/Time	Received By	Date/Time		
K. D. Lee	5/6/94 1315	J. Sweeney	5/6/94 1315		S = Soil
Relinquished By	Date/Time	Received By	Date/Time		SE = Sediment
J. Sweeney	5-9-94 1145	L. Sweeney	5/9/94 1145		SO = Solid
Relinquished By	Date/Time	Received By	Date/Time		SL = Sludge
A. Baul	5-10-94 1145	J. Sweeney	5/10/94 1145		W = Water
Relinquished By	Date/Time	Received By	Date/Time		O = Oil
J. Sweeney	5/12/94				A = Air

LABORATORY SECTION	Received By <i>Glenn Hostetter</i>	Title <i>Sample Processing</i>	Date/Time <i>5/18/94 1230</i>
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BC-6000-828 (12/92)

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page 1 of 1							
Collector <i>K. Trapp</i>		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal									
Project Designation 100-FR-3		Sampling Location <i>DOE</i>				SAF No. 94-087				Method of Shipment EMERY									
Ice Chest No. <i>EL-21</i>		Field Logbook No. <i>EFL-1054</i>				Bill of Lading/Air Bill No. <i>1402137708</i>													
Shipped To ORTEK		Offsite Property No. <i>W44-0-0594-1</i>																	
Possible Sample Hazards/Remarks		Preservative	HCL pH<2																
		Type of Container	Gs																
		No. of Container(s)	1																
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE <i>0.9% mod at lab</i>		Volume	40ml																
		HYDRA-ZINE																	
SAMPLE ANALYSIS <i>AA04455</i>																			
Sample No.	Matrix*	Date Sampled	Time Sampled																
<i>BOBMT2</i>	<i>W</i>	<i>3/17/94</i>	<i>1315</i>	<i>X</i>															
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS						Matrix*					
Relinquished By		Date/Time		Received By		Date/Time		<i>Key 4V</i> Date due 6/15/94 <i>Scan for radio activity - OK</i>						S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other					
<i>K. Trapp</i>		<i>5/19/94</i>		<i>L. Sweeney</i>		<i>5/17/94 1430</i>													
Relinquished By		Date/Time		Received By		Date/Time													
<i>L. Sweeney</i>		<i>5/17/94</i>																	
Relinquished By		Date/Time		Received By		Date/Time													
Relinquished By		Date/Time		Received By		Date/Time													
LABORATORY SECTION		Received By <i>Bernie Butcher</i>				Title <i>Sample Receiving</i>				Date/Time <i>5/18/94 1230</i>									
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time									

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector <i>K. Trapp</i>	Company Contact PH BUTCHER	Telephone No. 509-376-4388	<input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal
Project Designation 100-FR-3	Sampling Location <i>100 F</i>	SAF No. 94-087	
Ice Chest No. <i>ER-21</i>	Field Logbook No. <i>EFL-1054</i>	Method of Shipment EMERY	
Shipped To ORTEK	Offsite Property No. <i>W94-0-0594-1</i>	Bill of Lading/Air Bill No. <i>W94-0-0594-1</i>	

Preservative	HCl pH<2
--------------	----------

Type of Container	Gas
1. 20' Dry Van	1. 20' Dry Van
2. 40' Dry Van	2. 40' Dry Van
3. 45' Dry Van	3. 45' Dry Van
4. 53' Dry Van	4. 53' Dry Van
5. 60' Dry Van	5. 60' Dry Van
6. 70' Dry Van	6. 70' Dry Van
7. 80' Dry Van	7. 80' Dry Van
8. 90' Dry Van	8. 90' Dry Van
9. 100' Dry Van	9. 100' Dry Van
10. 110' Dry Van	10. 110' Dry Van
11. 120' Dry Van	11. 120' Dry Van
12. 130' Dry Van	12. 130' Dry Van
13. 140' Dry Van	13. 140' Dry Van
14. 150' Dry Van	14. 150' Dry Van
15. 160' Dry Van	15. 160' Dry Van
16. 170' Dry Van	16. 170' Dry Van
17. 180' Dry Van	17. 180' Dry Van
18. 190' Dry Van	18. 190' Dry Van
19. 200' Dry Van	19. 200' Dry Van
20. 210' Dry Van	20. 210' Dry Van
21. 220' Dry Van	21. 220' Dry Van
22. 230' Dry Van	22. 230' Dry Van
23. 240' Dry Van	23. 240' Dry Van
24. 250' Dry Van	24. 250' Dry Van
25. 260' Dry Van	25. 260' Dry Van
26. 270' Dry Van	26. 270' Dry Van
27. 280' Dry Van	27. 280' Dry Van
28. 290' Dry Van	28. 290' Dry Van
29. 300' Dry Van	29. 300' Dry Van
30. 310' Dry Van	30. 310' Dry Van
31. 320' Dry Van	31. 320' Dry Van
32. 330' Dry Van	32. 330' Dry Van
33. 340' Dry Van	33. 340' Dry Van
34. 350' Dry Van	34. 350' Dry Van
35. 360' Dry Van	35. 360' Dry Van
36. 370' Dry Van	36. 370' Dry Van
37. 380' Dry Van	37. 380' Dry Van
38. 390' Dry Van	38. 390' Dry Van
39. 400' Dry Van	39. 400' Dry Van
40. 410' Dry Van	40. 410' Dry Van
41. 420' Dry Van	41. 420' Dry Van
42. 430' Dry Van	42. 430' Dry Van
43. 440' Dry Van	43. 440' Dry Van
44. 450' Dry Van	44. 450' Dry Van
45. 460' Dry Van	45. 460' Dry Van
46. 470' Dry Van	46. 470' Dry Van
47. 480' Dry Van	47. 480' Dry Van
48. 490' Dry Van	48. 490' Dry Van
49. 500' Dry Van	49. 500' Dry Van
50. 510' Dry Van	50. 510' Dry Van
51. 520' Dry Van	51. 520' Dry Van
52. 530' Dry Van	52. 530' Dry Van
53. 540' Dry Van	53. 540' Dry Van
54. 550' Dry Van	54. 550' Dry Van
55. 560' Dry Van	55. 560' Dry Van
56. 570' Dry Van	56. 570' Dry Van
57. 580' Dry Van	57. 580' Dry Van
58. 590' Dry Van	58. 590' Dry Van
59. 600' Dry Van	59. 600' Dry Van
60. 610' Dry Van	60. 610' Dry Van
61. 620' Dry Van	61. 620' Dry Van
62. 630' Dry Van	62. 630' Dry Van
63. 640' Dry Van	63. 640' Dry Van
64. 650' Dry Van	64. 650' Dry Van
65. 660' Dry Van	65. 660' Dry Van
66. 670' Dry Van	66. 670' Dry Van
67. 680' Dry Van	67. 680' Dry Van
68. 690' Dry Van	68. 690' Dry Van
69. 700' Dry Van	69. 700' Dry Van
70. 710' Dry Van	70. 710' Dry Van
71. 720' Dry Van	71. 720' Dry Van
72. 730' Dry Van	72. 730' Dry Van
73. 740' Dry Van	73. 740' Dry Van
74. 750' Dry Van	74. 750' Dry Van
75. 760' Dry Van	75. 760' Dry Van
76. 770' Dry Van	76. 770' Dry Van
77. 780' Dry Van	77. 780' Dry Van
78. 790' Dry Van	78. 790' Dry Van
79. 800' Dry Van	79. 800' Dry Van
80. 810' Dry Van	80. 810' Dry Van
81. 820' Dry Van	81. 820' Dry Van
82. 830' Dry Van	82. 830' Dry Van
83. 840' Dry Van	83. 840' Dry Van
84. 850' Dry Van	84. 850' Dry Van
85. 860' Dry Van	85. 860' Dry Van
86. 870' Dry Van	86. 870' Dry Van
87. 880' Dry Van	87. 880' Dry Van
88. 890' Dry Van	88. 890' Dry Van
89. 900' Dry Van	89. 900' Dry Van
90. 910' Dry Van	90. 910' Dry Van
91. 920' Dry Van	91. 920' Dry Van
92. 930' Dry Van	92. 930' Dry Van
93. 940' Dry Van	93. 940' Dry Van
94. 950' Dry Van	94. 950' Dry Van
95. 960' Dry Van	95. 960' Dry Van
96. 970' Dry Van	96. 970' Dry Van
97. 980' Dry Van	97. 980' Dry Van
98. 990' Dry Van	98. 990' Dry Van
99. 1000' Dry Van	99. 1000' Dry Van
100. 1010' Dry Van	100. 1010' Dry Van
101. 1020' Dry Van	101. 1020' Dry Van
102. 1030' Dry Van	102. 1030' Dry Van
103. 1040' Dry Van	103. 1040' Dry Van
104. 1050' Dry Van	104. 1050' Dry Van
105. 1060	

No. of Container(s)	1
---------------------	---

Volume	40ml
--------	------

	HYDRA- ZINE
--	----------------

Special Handling and/or Storage	0.9°C rec'd at lab
COOL TO 4 DEGREES CENTIGRADE	

SAMPLE ANALYSIS

AA04098

Sample No.

Matrix[®]

Date Sampled

Time Sampled

FORMW7

U

X

CHAIN OF POSSESSION

Sign/Print Names

Relinquished By K. V. M. / K. T. 1900 Date/Time 5/9/94

Received By *L. Sweney* Date/Time *5/9/94* *1430*

Relinquished By LSweeney Date/Time 1080
5/17/94

Received By _____ Date/Time _____

Relinquished By	Date/Time
-----------------	-----------

Received By	Date/Time
-------------	-----------

Relinquished By	Date/Time
-----------------	-----------

Received By	Date/Time
-------------	-----------

SPECIAL INSTRUCTIONS

SPECIAL INSTRUCTIONS

Ref 4V Date due 6/15/94

Scan for radio activity - OK

Matrix*

S	=	Soil
SE	=	Sediment
SO	=	Solid
SL	=	Sludge
W	=	Water
O	=	Oil
A	=	Air
DS	=	Drum Solids
DL	=	Drum Liquids
T	=	Tissue
WI	=	Wipe
L	=	Liquid
V	=	Vegetation
X	=	Other

LABORATORY
SECTION

Received By

Title

Date/Time

FINAL SAMPLE DISPOSITION

Disposal Method	
-----------------	--

Disposed By

Date/Time

C.U. TUBER 940518

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page 1 of 1	
Collector <i>K. Trapp</i>		Company Contact PH BUTCHER				Telephone No. 509-376-4388				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal			
Project Designation 100-FR-3		Sampling Location 100 F				SAF No. 94-087				Method of Shipment EMERY			
Ice Chest No. <i>ER-21</i>		Field Logbook No. EFL-1054				Bill of Lading/Air Bill No. <i>1402137748</i>							
Shipped To ORTEK		Offsite Property No. <i>WY-0-0594-1</i>											
Possible Sample Hazards/Remarks		Preservative	HCL pH<2										
		Type of Container	Gs										
		No. of Container(s)	1										
Special Handling and/or Storage COOL TO 4 DEGREES CENTIGRADE <i>0.9°C rec'd at lab</i>		Volume	40ml										
SAMPLE ANALYSIS		HYDRA-ZINE											
AA04101													
Sample No.	Matrix*	Date Sampled	Time Sampled										
BOBMR3	W	5/11/94	1330	X									
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS					
Relinquished By		Date/Time		Received By		Date/Time		<i>Ref 4V Date due 6/15/94</i> <i>Scan for radio activity - OK</i>					
<i>K. Trapp</i>		<i>5/11/94 1435</i>		<i>Don E. Rogers</i>		<i>5-11-94 1435</i>							
<i>Don E. Rogers</i>		<i>5-11-94 1530</i>		<i>Shirley L. Sweeney</i>		<i>5-11-94 1530</i>							
<i>Shirley L. Sweeney</i>		<i>5/17/94</i>											
Relinquished By		Date/Time		Received By		Date/Time		Matrix*					
								S = Soil					
								SE = Sediment					
								SO = Solid					
								SL = Sludge					
								W = Water					
								O = Oil					
								A = Air					
								DS = Drum Solids					
								DL = Drum Liquids					
								T = Tissue					
								WI = Wipe					
								L = Liquid					
								V = Vegetation					
								X = Other					
LABORATORY SECTION		Received By		Title		Date/Time							
		<i>Gloria Rostater</i>		<i>Sample Receiving</i>		<i>5/18/94 1230</i>							
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time							

000042

LOC. Tupper 940518

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page <u>1</u> of <u>1</u>	
Collector <u>K. Trapp</u>		Company Contact <u>PH BUTCHER</u>				Telephone No. <u>509-376-4388</u>				Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal			
Project Designation <u>100-FR-3</u>		Sampling Location <u>100E</u>				SAF No. <u>94-087</u>				000048			
Ice Chest No. <u>ER-21</u>		Field Logbook No. <u>E-L-1054</u>				Method of Shipment <u>EMERY</u>							
Shipped To <u>ORTEK</u>		Offsite Property No. <u>W94-0-0594-1</u>				Bill of Lading/Air Bill No. <u>1402137748</u>							
Possible Sample Hazards/Remarks		Preservative	HCL pH<2										
		Type of Container	Gs										
		No. of Container(s)	1										
Special Handling and/or Storage <u>COOL TO 4 DEGREES CENTIGRADE 0.9 rec'd at Lab</u>		Volume	40ml										
		HYDRA-ZINE											
SAMPLE ANALYSIS													
<u>AA04103</u>													
Sample No.	Matrix*	Date Sampled	Time Sampled										
<u>B03MS1</u>	<u>W</u>	<u>5/11/94</u>	<u>0930</u>	<u>X</u>									
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*	
Relinquished By		Date/Time		Received By		Date/Time		<u>Key 4U Date due 6/15/94</u> <u>Scan for radio activity - OK</u>				S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
<u>K. Trapp/K. Trapp</u>		<u>5/11/94 1435</u>		<u>Don E. Rogers</u>		<u>5-11-94 1435</u>							
<u>Don E. Rogers</u>		<u>5-11-94 1520</u>		<u>L. Sweeney</u>		<u>5-11-94 1520</u>							
<u>L. Sweeney</u>		<u>5/11/94 1520</u>		<u>L. Sweeney</u>		<u>5-11-94 1520</u>							
Relinquished By		Date/Time		Received By		Date/Time							
<u>L. Sweeney</u>		<u>5/11/94 1520</u>		<u>L. Sweeney</u>		<u>5-11-94 1520</u>							
Relinquished By		Date/Time		Received By		Date/Time							
<u>L. Sweeney</u>		<u>5/11/94 1520</u>		<u>L. Sweeney</u>		<u>5-11-94 1520</u>							
LABORATORY SECTION		Received By <u>Glenn D. Dutton</u>		Title <u>Sample Receiving</u>		Date/Time <u>5/18/94 1230</u>							
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time							

CV TOWERS 940517

Westinghouse Hanford Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										Page <u>1</u> of <u>1</u>	
Collector <u>K. Trapp G.G. Hamelton</u>		Company Contact <u>PH BUTCHER</u>				Telephone No. <u>509-376-4388</u>				Date Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal			
Project Designation <u>100-FR-3</u>		Sampling Location				SAF No. <u>94-087</u>				640000			
Ice Chest No. <u>ER 21</u>		Field Logbook No.				Method of Shipment <u>EMERY</u>							
Shipped To <u>ORTEK</u>		Offsite Property No. <u>W94-0-0594-1</u>				Bill of Lading/Air Bill No. <u>1402137748</u>							
Possible Sample Hazards/Remarks		Preservative	HCL pH<2										
		Type of Container	Gs										
		No. of Container(s)	1										
Special Handling and/or Storage <u>COOL TO 4 DEGREES CENTIGRADE 3C 5/12/94 1430</u>		Volume	40ml										
SAMPLE ANALYSIS <u>0.9°C Rec'd at lab</u> <u>AA04104</u>		HYDRA-ZINE											
Sample No.	Matrix*	Date Sampled	Time Sampled										
<u>303 MVI</u>	<u>W</u>	<u>5/12/94</u>	<u>1130</u>	<u>X</u>									
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*			
Relinquished By	Date/Time	Received By	Date/Time	<u>Key 4V Date due 6/15/94</u> <u>Scan for radioactivity OK</u>				S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other					
<u>G.G. Hamelton</u>	<u>5/12/94 1400</u>	<u>Joene E. Rogers</u>	<u>5-12-94 1400</u>										
Relinquished By	Date/Time	Received By	Date/Time										
<u>Joene E. Rogers</u>	<u>5-12-94 1425</u>	<u>AJ Simpson</u>	<u>5/12/94 1430</u>										
Relinquished By	Date/Time	Received By	Date/Time										
<u>AJ Simpson</u>	<u>5/17/94 1045</u>												
Relinquished By	Date/Time	Received By	Date/Time										
LABORATORY SECTION	Received By	Title		Date/Time									
	<u>Blanca Butcher</u>	<u>Sample Receiving</u>		<u>5/18/94 1230</u>									
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time									

Westinghouse Hanford
Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page 1 of 1

Date Turnaround

☐ Priority
☒ Normal

Collector *K. Trapp*

Company Contact
PH BUTCHER

Telephone No.
509-376-4388

Project Designation
100-FR-3

Sampling Location
120 F

SAF No.
94-087

Ice Chest No. *ER-21*

Field Logbook No.
EEL-1054

Method of Shipment
EMERY

Shipped To
ORTEK

Offsite Property No.
W94-0-0594-1

Bill of Lading/Air Bill No. *1402132748*

Possible Sample Hazards/Remarks

Preservative
HCL pH<2

Type of
Container
Gs

No. of
Container(s)
1

Special Handling and/or Storage
COOL TO 4 DEGREES CENTIGRADE

*0.9°C rec'd
at lab*

Volume
40ml
HYDRA-
ZINE

SAMPLE ANALYSIS

AA04105

Sample No.

Matrix*

Date Sampled

Time Sampled

AB03MT3

W

5/12/94

0930

X

CHAIN OF POSSESSION

Sign/Print Names

SPECIAL INSTRUCTIONS

Matrix*

Relinquished By *G. G. Hamrick* Date/Time *5/7/94 1400*

Relinquished By *Baron E. Rogers* Date/Time *5-12-94 1425*

Relinquished By *A. Simpson* Date/Time *5/17/94 1045*

Relinquished By _____ Date/Time _____

Received By *Baron E. Rogers* Date/Time *5-12-94 1400*

Received By *A. Simpson* Date/Time *5/12/94 1425*

Received By _____ Date/Time _____

Received By _____ Date/Time _____

Ref 4V Date due 6/15/94
Scan for radio activity - OK

S = Soil
SE = Sediment
SO = Solid
SL = Sludge
W = Water
O = Oil
A = Air
DS = Drum Solids
DL = Drum Liquids
T = Tissue
WI = Wipe
L = Liquid
V = Vegetation
X = Other

LABORATORY
SECTION

Received By

Title

Date/Time

FINAL SAMPLE
DISPOSITION

Disposal Method

Disposed By

Date/Time

9713517.1718

END OF PACKAGE

000051